Application No.: 09/393,590 Atty Doc.: 31242-701.201

Response filed: December 13, 2006

Reply to Office Action of October 16, 2006

Listing of Claims:

1. (Currently Amended) A stable ready to use liquid pharmaceutical botulinum toxin formulation for therapeutic use in humans, comprising

a pharmaceutically acceptable buffered saline, wherein the buffering component is a succinate buffer, in which said buffered saline provides a buffered pH range to the formulation between pH 5 and pH 6, and

a therapeutic concentration of a purified botulinum toxin suitable for use in humans, and an excipient protein comprising serum albumin; and

wherein the formulation is eapable of being stable as a liquid when stored for at least one year at a temperature between of about 0 and 10 5 degrees centigrade or for at least 6 months at a temperature between about 10 and 30[[oC]] degrees centigrade.; and wherein said buffered saline comprises a buffering component selected from the group consisting of phosphate buffer, phosphate-citrate buffer, and succinate buffer.

(Cancelled) 2-3.

- 4. (Currently Amended) The formulation of claim 1, wherein said buffered pH is pH 5.6± 0.2 between about pH 5.4 and pH 5.8.
- 5. (Currently Amended) The formulation of claim 1, wherein said toxin formulation is stable in liquid form for at least two years at a temperature of about 5 degrees centigrade.
- 6.-7. (Cancelled)
- (Previously Presented) The formulation of claim 1, wherein said botulinum toxin is of a 8. botulinum toxin serotype selected from the group consisting of serotypes A, B, C₁, C₂, D, E, F and G.

10%.

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9. (Previously Presented) The formulation of claim 8, wherein said botulinum toxin is botulinum toxin Type B present at said therapeutic concentration in the range of $100-20,000 \text{ U/ml} \pm$

10. (Previously Presented) The formulation of claim 9, wherein said botulinum toxin Type B is

present in a high molecular weight complex of 700 kilodaltons (kD) \pm 10%.

11. (Previously Presented) The formulation of claim 9, wherein said botulinum toxin Type B is

present at said the rapeutic concentration between 1000-5000 U/ml.

(Currently Amended) The formulation of claim 8, wherein said botulinum toxin is botulinum
toxin Type A, and is present in the stable ready to use liquid pharmaceutical formulation at said

therapeutic concentration in the range of between 20-2000 U/ml.

13. (Currently Amended) The formulation of claim 12, wherein said botulinum toxin Type A is

present in the stable, ready to use liquid pharmaceutical formulation at said therapeutic

concentration in the range of between 100-1000 U/ml.

14. (Currently Amended) The formulation of claim 1, wherein the stable, ready-to-use liquid

formulation comprises 100 mM sodium chloride; 10 mM succinate buffer at a buffered pH of 5.6;

0.5 mg/mL human serum albumin; and botulinum type B present at a concentration of 5,000 \pm 1000

U/ml.

(Cancelled)

(Currently Amended) A stable, ready to use liquid pharmaceutical formulation for

therapeutic use in humans comprising

0.5 mg/ml human serum albumin,

- 10. (Previously Presented) The formulation of claim 9, wherein said botulinum toxin Type B is present in a high molecular weight complex of 700 kilodaltons (kD) ± 10%.
- 11. (Previously Presented) The formulation of claim 9, wherein said botulinum toxin Type B is present at said therapeutic concentration between 1000-5000 U/ml.
- 12. (Currently Amended) The formulation of claim 8, wherein said botulinum toxin is botulinum toxin Type A, and is present in the stable ready-to-use liquid pharmaceutical formulation at said therapeutic concentration in the range of between 20-2000 U/ml.
- 13. (Currently Amended) The formulation of claim 12, wherein said botulinum toxin Type A is present in the stable, ready-to-use liquid pharmaceutical formulation at said therapeutic concentration in the range of between 100-1000 U/ml.
- 14. (Currently Amended) The formulation of claim 1, wherein the stable, ready-to-use liquid formulation comprises 100 mM sodium chloride; 10 mM succinate buffer at a buffered pH of 5.6; 0.5 mg/mL human serum albumin; and botulinum type B present at a concentration of $5,000 \pm 1000 \text{ U/ml}$.
- (Cancelled)
- (Currently Amended) A stable, ready-to-use liquid pharmaceutical formulation for therapeutic use in humans comprising
 - 0.5 mg/ml human serum albumin,

botulinum toxin formulation for therapeutic use in humans, comprising type B present at a concentration of 5.000 ± 1000 U/ml, and

- a pharmaceutically acceptable buffered saline which provides a buffered pH range to the formulation of pH 5.6, and
- <u>wherein said</u> botulinum toxin **that** is stable in said formulation; **and** for at least about 6 months at a temperature between 10 and 30 degrees centigrade \pm 10%, and

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botulinum toxin formulation for the rapeutic use in humans, comprising type B present at a concentration of 5.000 ± 1000 U/ml, and

a pharmaceutically acceptable buffered saline which provides a buffered pH range to the formulation of pH 5.6. and

wherein said botulinum toxin that is stable in said formulation; and for at least about 6 months at a temperature between 10 and 30 degrees centigrade ± 10%, and

wherein said buffered saline further comprises 100 mM sodium chloride[[;]] and 10 mM succinate buffer at a buffered pH of 5.6; 0.5-mg/ml human serum albumin and botulinum type B present at a concentration of 5,000 ± 1000 U/ml.

17.-28. (Cancelled)

- 29. (Previously Presented) A method of treating a patient in need of inhibition of cholinergic input to a selected muscle, muscle group, gland or organ, comprising administering to the selected muscle, muscle group, gland or organ of the patient a pharmaceutically effective dose of a stabilized liquid botulinum toxin formulation of claims 1 or 16.
- 30. (Original) The method of claim 29, wherein said patient is suffering from a disorder selected from the group consisting of spasticity, blepharospasm, strabismus, hemifacial spasm, dystonia, otitis media, spastic colitis, animus, urinary detrusor-sphincter dyssynergia, jaw-clenching, and curvature of the spine.
- 31. (Original) The method of claim 30, wherein said patient is suffering from spasticity due to one or more of the group consisting of stroke, spinal cord injury, closed head trauma, cerebral palsy, multiple sclerosis, and Parkinson's disease.
- 32. (Original) The method of claim 30, wherein said patient is suffering from a dystonia selected from the group consisting of spasmodic torticollis (cervical dystonia), spasmodic dyshponia, limb dystonia, laryngeal dystonia, and oromandibular (Meige's) dystonia.

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33. (Original) The method of claim 29, wherein said selected muscle or muscle group produces a

wrinkle or a furrowed brow.

34. (Original) The method of claim 29, wherein said muscle is a perineal muscle and wherein

said patient is in the process of giving birth to a child.

35. (Original) The method of claim 29, wherein said patient is suffering from a condition

selected from the group consisting of myofascial pain, headache associated with migraine, vascular disturbances, neuralgia, neuropathy, arthritis pain, back pain, hyperhydrosis, rhinnorhea, asthma,

excessive salivation, and excessive stomach acid secretion.

36. (Original) The method of claim 29, wherein said formulation is stable as a liquid for at least

one year at a temperature of about 5+3 degrees centigrade.

37. (Original) The method of claim 29, wherein said formulation is stable as a liquid for at least

one year at a temperature of about 4+2 degrees centigrade.

38. (Currently Amended) The method of claim 29, wherein said formulation is stable as a liquid

for at least two years $\underline{\text{six month}}$ at a temperature between $\underline{\text{of}}$ about 0 and $\underline{20}$ $\underline{25}$ degrees centigrade.

39. (Currently Amended) The method of a claim 29, wherein said buffered pH range is about pH

 5.6 ± 0.2 between about pH 5.4 and pH 5.8.

40.-41. (Cancelled)

42. (Original) The method of claim 29, wherein said botulinum toxin is a botulinum toxin

serotype selected from the group consisting of serotypes A, B, C1, C2, D, E, F and G.

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43. (Original) The method of claim 42, wherein said botulinum toxin is botulinum toxin Type B

present at a concentration in the range of about 100-20,000 U/ml.

44. (Original) The method of claim 43, wherein said botulinum toxin Type B is present in a high

molecular weight complex of about 700 kD.

45. (Original) The method of claim 43, wherein said botulinum toxin Type B is present at a

concentration of about 1000-5000 U/ml.

46. (Original) The method of claim 42, wherein said botulinum toxin is botulinum toxin Type A,

present at a concentration in the range of about 20-2000 U/ml.

47. (Original) The method of claim 46, wherein said botulinum toxin Type A is present at a

concentration in the range of about 100-1000 U/ml.

48. (Cancelled)

49. (Currently amended) The method of claim 48, wherein said excipient protein is selected from

the group consisting of serum albumin[[,]] is recombinant human serum albumin, and gelatin.

50. (Original) The method of claim 29, wherein said patient is refractory to botulinum toxin

Type A and said botulinum toxin in said formulation is selected from the group consisting of

botulinum serotypes B, C1, C2, D, E, F and G.

51. (Original) The method of claim 50, wherein said botulinum toxin in said formulation is

botulinum toxin Type B.

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52. (Original) The method of claim 29, wherein said patient is refractory to botulinum toxin Type B and said botulinum toxin in said formulation is selected from the group consisting of botulinum serotypes A, C₁, C₂, D, E, F and G.

- 53. (Original) The method of claim 52, wherein said botulinum toxin in said formulation is botulinum toxin Type A.
- 54. (New) The formulation of claim 1, wherein said formulation is stable as a liquid for at least one year at a temperature of about 5+3 degrees centigrade.
- 55. (New) The formulation of claim 1, wherein said formulation is stable as a liquid for at least one year at a temperature of about 4+2 degrees centigrade.